## **IN THE ABSTRACT:**

For the purpose of conducting optimal eddy current correction within a limited output range, a corrective value for eddy current correction for a gradient magnetic field is calculated (501 505), if the calculated value does not exceed a predetermined upper limit value, correction is conducted on the gradient magnetic field using the calculated value (507, 521, 525), and if the calculated value exceeds the predetermined upper limit value, a plurality of gradient magnetic fields affected by eddy current are simulated using a plurality of candidate corrective values not greater than the upper limit value (507 517), and correction is conducted on the gradient magnetic field using a candidate corrective value by which a relatively optimal gradient magnetic field can be obtained (519 525).